

REMARKS

The Official Action mailed May 9, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on August 22, 2006.

The Applicant submitted a further Information Disclosure Statement on July 7, 2008 (received by OIPE July 10, 2008). The Applicant respectfully requests that the Examiner provide an initialed copy of the Form PTO-1449 evidencing consideration of the above-referenced Information Disclosure Statement.

Claims 1-16 are pending in the present application, of which claims 1-8, 10, 12 and 13 are independent. Claims 1-8, 10 and 12-14 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 1-3, 5-8, 10, 11 and 13-15 as obvious based on U.S. Publication No. 2003/0052324 to Kimura. Although the Official Action includes independent claim 8 in the rejection based on Kimura, claim 8 recites "a demodulation circuit" among other features, and the Official Action concedes that Kimura "does not disclose a demodulation circuit" among other features (page 8, Paper No. 20080430). Also, dependent claim 15 depends on independent claim 12, which also recites "a demodulation circuit" among other features and is not included in the present rejection. Therefore, it appears that the Official Action only rejects claims 1-3, 5-7, 10, 11, 13 and 14 as obvious based on Kimura. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against independent claims 1-3, 5-7, 10 and 13 of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either

in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 1-3, 5-7, 10 and 13 have been amended to recite an antenna configured to receive a first signal, wherein a power supply voltage is generated based on the first signal; an integrated circuit comprising a thin film transistor; a light-receiving element configured to receive a second optical signal; and a light-emitting element configured to transmit a third optical signal. For the reasons provided below, Kimura does not teach or suggest the above-referenced features of the present invention.

Regarding the present invention, the specification discloses the following (page 4, lines 20-29):

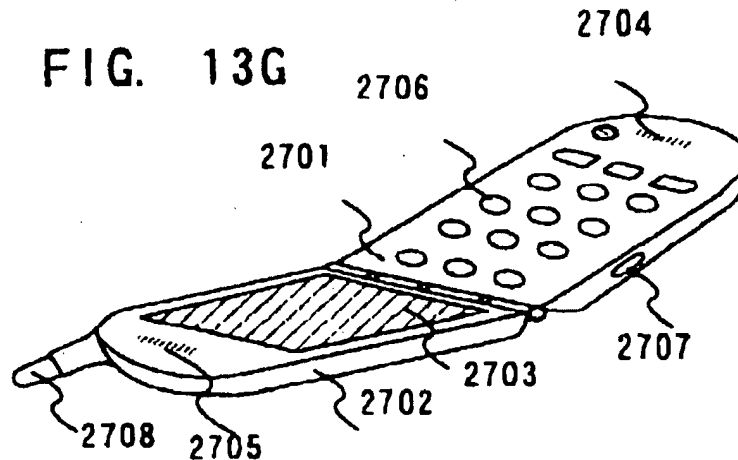
According to the present invention, transmission/reception of a signal is performed by optical communication and voltage of a power supply is supplied by radio waves. Therefore, it is possible that higher voltage of the power supply can be supplied to an integrated circuit as compared with the case of performing transmission/reception of a signal and supplying the voltage of a power supply when only an optical signal is used. Therefore, communication range can be lengthened, and constraint

in design of an integrated circuit by a power supply voltage can be reduced.

Moreover, a communication area can be more easily limited as compared with the case of performing transmission/reception of a signal and supplying the voltage of a power supply when only radio waves are used.

In order to clarify the claimed invention, the Applicant has amended claims 1-3, 5-7, 10 and 13 as noted in detail above.

The Official Action asserts that Kimura discloses "an antenna 2708 (Fig. 13G, Para. 190)" (page 2, Paper No. 20080430; Figure 13G reproduced below).



The Applicant respectfully disagrees and traverses the assertions in the Official Action. Kimura appears to teach that the device including the antenna 2708 is a cellular phone. However, the Applicant respectfully submits that the antenna 2708 of Kimura is not configured to receive a first signal, wherein a power supply voltage is generated based on the first signal.

Also, the Applicant respectfully submits that Kimura does not teach or suggest a light-receiving element configured to receive a second optical signal; and a light-emitting element configured to transmit a third optical signal.

Since Kimura does not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and

withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects dependent claims 9 and 16 as obvious based on the combination of Kimura and U.S. Publication No. 2004/0152392 to Nakamura. Since claim 9 is multiply dependent on claims 5-8, since claim 16 is multiply dependent on claims 13-15, since the rejection based on Kimura appears to relate solely to claims 1-3, 5-7, 10 and 13, and since claim 15 depends from claim 12, it appears that the Official Action only rejects claims 9/5-7 and 16/13-14 as obvious based on the combination of Kimura and Nakamura.

Please incorporate the arguments above with respect to the deficiencies in Kimura. Nakamura does not cure the deficiencies in Kimura. The Official Action relies on Nakamura to allegedly teach the features of the dependent claims. Specifically, the Official Action relies on Nakamura to allegedly teach that a second substrate is a plastic substrate (pages 11-12, Paper No. 20080430). However, Kimura and Nakamura, either alone or in combination, do not teach or suggest that Kimura should be modified to include an antenna configured to receive a first signal, wherein a power supply voltage is generated based on the first signal; an integrated circuit comprising a thin film transistor; a light-receiving element configured to receive a second optical signal; and a light-emitting element configured to transmit a third optical signal. Since Kimura and Nakamura do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

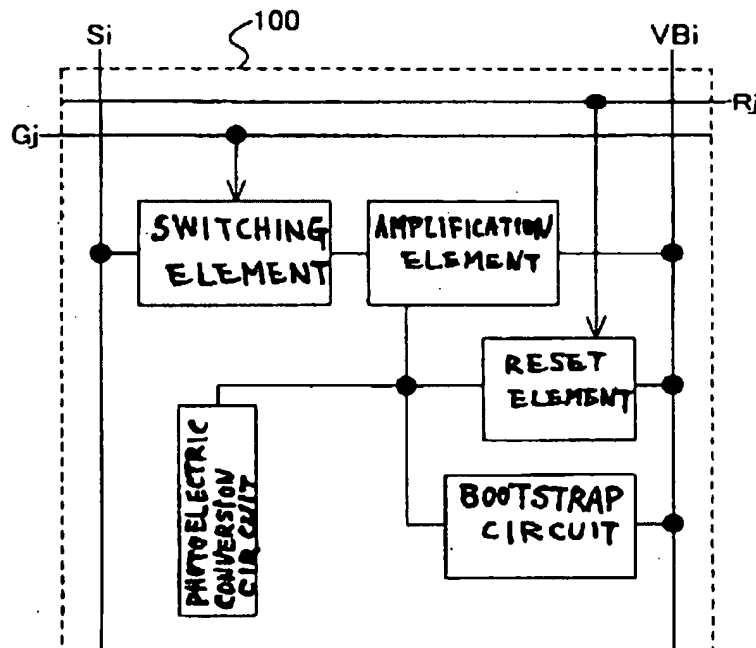
The Official Action rejects claims 4 and 12 as obvious based on the combination of Kimura and U.S. Patent No. 6,590,633 to Nishi. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 4 and 12 have

been amended to recite a light-receiving element configured to receive a first optical signal; and a light-emitting element configured to transmit a second optical signal, wherein the integrated circuit comprises a connection terminal, a rectification circuit that generates power supply voltage from an alternating current signal that is input to the connection terminal by an antenna, a demodulation circuit for demodulating the first optical signal received in the light-receiving element, and a logic circuit that conducts arithmetic operation according to the first optical signal that is demodulated to generate a third signal, wherein the light-emitting element converts the third signal to the second optical signal. For the reasons provided below, Kimura and Nishi, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action asserts that "Kimura discloses ... a rectification circuit (Fig. 14B, element "AMPLIFICATION ELEMENT") that generates power supply voltage from an alternating current signal that is input to the connection terminal by an antenna" (page 8, Paper No. 20080430; Figure 14B reproduced below).

FIG. 14B



The Applicant respectfully disagrees and traverses the assertions in the Official Action.

The amplification element of Kimura does not generate power supply voltage from an alternating current signal that is input to the connection terminal by an antenna. That is, the function of the amplification element is different from that of the rectification circuit of the present invention.

Nishi does not cure the above-referenced deficiencies in Kimura.

Therefore, the Applicant respectfully submits that Kimura and Nishi, either alone or in combination, do not teach or suggest a light-receiving element configured to receive a first optical signal; and a light-emitting element configured to transmit a second optical signal, wherein the integrated circuit comprises a connection terminal, a rectification circuit that generates power supply voltage from an alternating current signal that is input to the connection terminal by an antenna, a demodulation circuit for demodulating the first optical signal received in the light-receiving element, and a logic circuit that conducts arithmetic operation according to the first optical signal that is demodulated to generate a third signal, wherein the light-emitting element converts the third signal to the second optical signal.

Since Kimura and Nishi do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, there is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Kimura and Nishi or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action

does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (emphasis in original). KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

Kimura and Nishi do not describe analogous art. The Official Action concedes that Kimura "does not disclose a demodulation circuit for demodulating a first signal received in the light-receiving element, and a logic circuit that conducts arithmetic operation according to the first signal that is demodulated to generate a second signal, wherein the light-emitting element can convert the second signal to an optical signal" (pages 8-9, Paper No. 20080430). The Official Action relies upon Nishi to allegedly teach "a demodulation circuit (col. 12, line 27) and a logic circuit (col. 12, line 20)" and the operation of the same, citing column 12, lines 22-24 (page 9, Id.). The Official Action asserts that "[it] would have been obvious ... to add Kimura's structure with Nishi's structure including demodulation circuit and logic circuit to management and control of the charging state and the management and control the communication port" (Id.). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

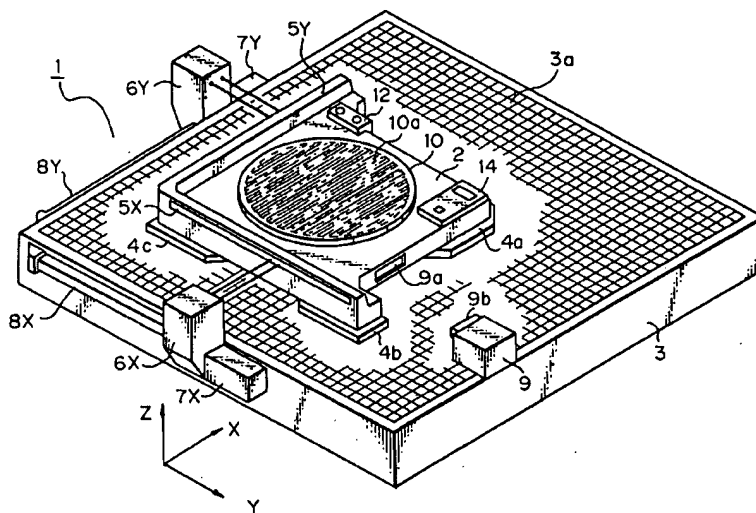
Nishi is directed to an entirely different field of endeavor from the present application and Kimura. MPEP § 2141.01(a) states the following:

The examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor

was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

Specifically, Nishi is directed to a stage apparatus 1 (column 12, line 29; Figure 1, reproduced below); whereas, Kimura is directed to a semiconductor device.

Fig. 1



The Applicant respectfully submits that the technical fields of Nishi's device and Kimura's semiconductor device are different from each other. Also, Nishi is not in the field of the Applicant's endeavor, is not reasonably pertinent to the particular problem with which the inventor is concerned, and would not have logically commended itself to an inventor's attention in considering the problem. As such, the Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention would have added features from Kimura's stage apparatus 1 to Nishi's semiconductor device.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Kimura and Nishi or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action mailed May 9, 2008, appears to be incomplete. As noted in detail above, while the Official Action appears to address independent claims 1-7, 10, 12 and 13 and dependent claims 9/5-7 and 16/13-14, the Official Action does not appear to address independent claim 8, dependent claim 9 as it depends from claim 8, or dependent claim 16 as it depends from claim 15, which depends from claim 12. It appears that claims 8, 9/8 and 16/15/12 were merely overlooked by the Examiner. As such, the Applicant respectfully requests issuance of a Notice of Allowability or new non-final Official Action, as appropriate. In any event, for at least the reasons set forth above, the Applicant respectfully submits that claims 8, 9/8 and 16/15/12 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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